

Atty. Docket No.: 59036-249737

PATENT

AMENDMENT**Amendment to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Please amend claims 43, 60, 70 and 78 without prejudice.

1-33. (Canceled)

34. (Previously Presented) A method comprising:

receiving an indication of a retirement income goal for a particular investor;
displaying a set of input objects within a user interface screen, the set of input objects to receive input decisions including at least:
an indication of a target retirement age for the particular investor, and
an indication of a target level of investment risk for the particular investor that is constrained to be within a feasible set of risk that is attainable by the particular investor via a set of financial products that are available to the particular investor for investment;
identifying a relationship between future returns of each financial product of the set of financial products and future returns of combinations of one or more factor asset classes of a set of factor asset classes by determining each financial product's effective asset mix with respect to the set of factor asset classes; and

Atty. Docket No.: 59036-249737

PATENT

displaying a set of output values within the user interface screen, the set of output values including at least:

- an indication of the probability of achieving the retirement income goal, and
- an indication of the most likely retirement income in current dollars based upon the retirement income goal, the input decisions, and a recommended allocation of wealth among one or more financial products of the set of financial products that are available to the particular investor for investment.

35. (Previously Presented) The method of claim 34, further comprising displaying a representation of the recommended allocation of wealth by graphically depicting relative allocations of wealth among those of the financial products of the set of financial products included in a recommended portfolio.
36. (Canceled)
37. (Previously Presented) The method of claim 34, wherein said determining each financial product's effective asset mix with respect to the set of factor asset classes comprises performing returns-based style analysis.
38. (Previously Presented) The method of claim 34, wherein said determining each financial product's effective asset mix with respect to the set of factor asset classes comprises surveying the underlying assets held in the financial product.
39. (Previously Presented) The method of claim 34, wherein said determining each financial product's effective asset mix with respect to the set of factor asset classes comprises

Atty. Docket No.: 59036-249737

PATENT

obtaining exposure information based on a target benchmark associated with the financial product.

40. (Previously Presented) The method of claim 34, further comprising determining expected returns and volatility of returns for each of a plurality of efficient portfolios based upon the relationship and the input decisions, each of the plurality of efficient portfolios including a combination of one or more of the financial products from the set of financial products.
41. (Previously Presented) The method of claim 40, further comprising selecting the recommended portfolio from the plurality of efficient portfolios by identifying an efficient portfolio of the plurality of efficient portfolios that maximizes an expected utility of wealth for the particular investor.
42. (Previously Presented) The method of claim 34, further comprising:
forecasting returns associated with each core asset class of a set of core asset classes by
generating core asset class scenarios based upon future scenarios of one or more
economic factors with an equilibrium econometric model; and
forecasting returns associated with each factor asset class of the set of factor asset classes
by generating factor model asset scenarios based upon the core asset class
scenarios.

Atty. Docket No.: 59036-249737

PATENT

43. (Currently Amended) A method comprising:
- receiving an indication of a financial goal of a particular investor;
 - receiving input decisions that relate to tradeoffs in connection with pursuing the financial goal, the input decisions comprising an indication of a time horizon that is acceptable to the particular investor, an indication of a level of investment risk that is acceptable to the particular investor and that is constrained to be within a feasible set of risk that is attainable by a particular investor via a set of financial products that are available to the particular investor for investment, and an indication of a level of savings that is acceptable to the particular investor;
 - identifying a relationship between future returns of each financial product of the set of financial products and future returns of combinations of one or more factor asset classes of a set of factor asset classes by determining each financial product's effective asset mix with respect to the set of factor asset classes;
 - determining a recommended portfolio of one or more financial products from the set of financial products that are available to the particular investor for investment based upon the input decisions;
 - determining the probability of the particular investor achieving the financial goal based upon a probability distribution representing a set of possible future portfolio values of the recommended portfolio upon expiration of the time horizon by evaluating the cumulative probability that meets or exceeds the financial goal; and
 - providing feedback regarding the likelihood of achieving the financial goal in view of the input decisions by causing to be displayed within a user interface screen ~~displaying an indication of the probability of the particular investor achieving the~~ financial goal in response to receipt of the input decisions.

Atty. Docket No.: 59036-249737

PATENT

44. (Previously Presented) The method of claim 43, further comprising displaying a representation of the recommended portfolio by graphically depicting allocations of wealth among those of the financial products of the set of financial products included in the recommended portfolio.
45. (Canceled)
46. (Previously Presented) The method of claim 43, wherein said determining each financial product's effective asset mix with respect to the set of factor asset classes comprises performing returns-based style analysis.
47. (Previously Presented) The method of claim 43, wherein said determining each financial product's effective asset mix with respect to the set of factor asset classes comprises surveying the underlying assets held in the financial product.
48. (Previously Presented) The method of claim 43, wherein said determining each financial product's effective asset mix with respect to the set of factor asset classes comprises obtaining exposure information based on a target benchmark associated with the financial product.
49. (Previously Presented) The method of claim 43, further comprising determining expected returns and volatility of returns for each of a plurality of efficient portfolios based upon the relationship and one or more of the input decisions, each of the plurality of efficient portfolios including a combination of one or more of the financial products from the set of financial products.

Atty. Docket No.: 59036-249737

PATENT

50. (Previously Presented) The method of claim 49, wherein said determining a recommended portfolio comprises identifying an efficient portfolio of the plurality of efficient portfolios that maximizes an expected utility of wealth for the particular investor.
51. (Previously Presented) The method of claim 43, further comprising:
forecasting returns associated with each core asset class of a set of core asset classes by
generating core asset class scenarios based upon future scenarios of one or more economic factors with an equilibrium econometric model; and
forecasting returns associated with each factor asset class of the set of factor asset classes
by generating factor model asset scenarios based upon the core asset class scenarios.
52. (Previously Presented) A method comprising:
receiving an indication of a financial goal of a particular investor;
identifying a relationship between future returns of each financial product of a set of financial products that are available to the particular investor and future returns of combinations of one or more factor asset classes of a set of factor asset classes by determining each financial product's effective asset mix with respect to the set of factor asset classes; and
allowing an end user to interactively explore tradeoffs among time, savings, and risk and their impact on a probability of the particular investor achieving the financial goal by
displaying one or more input objects in a first portion of a user interface screen,
the one or more input objects being constrained to receive feasible input

Atty. Docket No.: 59036-249737

PATENT

decisions relating to variables involved in pursuing the financial goal, the input decisions comprising an indication of a time horizon that is acceptable to the particular investor, an indication of a level of investment risk that is acceptable to the particular investor, and an indication of a level of savings that is acceptable to the particular investor; determining a recommended portfolio of one or more financial products from the set of financial products based upon the input decisions; and displaying a set of output values in a second portion of the user interface screen, the set of output values comprising an indication of the probability of the particular investor achieving the financial goal based upon the recommended portfolio, the relationship and the time horizon.

53. (Previously Presented) The method of claim 52 further comprising displaying a representation of the recommended portfolio by graphically depicting allocations of wealth among those of the financial products of the set of financial products included in the recommended portfolio.
54. (Canceled)
55. (Previously Presented) The method of claim 52, wherein said determining each financial product's effective asset mix with respect to the set of factor asset classes comprises performing returns-based style analysis.
56. (Previously Presented) The method of claim 52, wherein said determining each financial product's effective asset mix with respect to the set of factor asset classes comprises surveying the underlying assets held in the financial product.

Atty. Docket No.: 59036-249737

PATENT

57. (Previously Presented) The method of claim 52, wherein said determining each financial product's effective asset mix with respect to the set of factor asset classes comprises obtaining exposure information based on a target benchmark associated with the financial product.
58. (Previously Presented) The method of claim 52, further comprising determining expected returns and volatility of returns for each of a plurality of efficient portfolios based upon the relationship and one or more of the input decisions, each of the plurality of efficient portfolios including a combination of one or more of the financial products from the set of financial products.
59. (Previously Presented) The method of claim 58, wherein said determining a recommended portfolio comprises identifying an efficient portfolio of the plurality of efficient portfolios that maximizes an expected utility of wealth for the particular investor.
60. (Currently Amended) The method of claim 52 54, further comprising:
forecasting returns associated with each core asset class of a set of core asset classes by
generating core asset class scenarios based upon future scenarios of one or more
economic factors with an equilibrium econometric model; and
forecasting returns associated with each factor asset class of the set of factor asset classes
by generating factor model asset scenarios based upon the core asset class
scenarios.
61. (Previously Presented) A method comprising:

Atty. Docket No.: 59036-249737

PATENT

one or more computer systems determining a recommended allocation of wealth among a set of financial products that are available for investment by a particular investor, the set of financial products comprising one or more mutual funds;

the one or more computer systems identifying a relationship between future returns of each financial product of the set of financial products and future returns of combinations of one or more factor asset classes of a set of factor asset classes by determining each financial product's effective asset mix with respect to the set of factor asset classes;

said determining a recommended allocation of wealth being based upon (a) a financial goal identified by the particular investor, and (b) input decisions relating to variables involved in pursuing the financial goal, the input decisions comprising an indication of a time horizon that is acceptable to the particular investor, an indication of a level of investment risk that is acceptable to the particular investor, and an indication of a level of savings that is acceptable to the particular investor; and

the one or more computer systems graphically depicting the recommended allocation of wealth among the one or more financial products of the set of available financial products.

62. (Previously Presented) The method of claim 61, further comprising displaying an indication of a probability of the particular investor achieving the financial goal based upon the recommended allocation of wealth and the time horizon.

63. (Canceled)

Atty. Docket No.: 59036-249737

PATENT

64. (Previously Presented) The method of claim 61, wherein said determining each financial product's effective asset mix with respect to the set of factor asset classes comprises performing returns-based style analysis.
65. (Previously Presented) The method of claim 61, wherein said determining each financial product's effective asset mix with respect to the set of factor asset classes comprises surveying the underlying assets held in the financial product.
66. (Previously Presented) The method of claim 61, wherein said determining each financial product's effective asset mix with respect to the set of factor asset classes comprises obtaining exposure information based on a target benchmark associated with the financial product.
67. (Previously Presented) The method of claim 61, further comprising determining expected returns and volatility of returns for each of a plurality of efficient portfolios based upon the relationship and the one or more input decisions, each of the plurality of efficient portfolios including a combination of one or more of the financial products from the set of financial products.

Atty. Docket No.: 59036-249737

PATENT

68. (Previously Presented) The method of claim 67, further comprising selecting a recommended portfolio from the plurality of efficient portfolios by identifying an efficient portfolio of the plurality of efficient portfolios that maximizes an expected utility of wealth for the particular investor.
69. (Previously Presented) The method of claim 61, further comprising:
forecasting returns associated with each core asset class of a set of core asset classes by
generating core asset class scenarios based upon future scenarios of one or more economic factors with an equilibrium econometric model; and
forecasting returns associated with each factor asset class of the set of factor asset classes by generating factor model asset scenarios based upon the core asset class scenarios.
70. (Currently Amended) A method comprising:
identifying a relationship between future returns of each financial product of a set of financial products that are available to a particular investor for investment and future returns of combinations of one or more factor asset classes of a set of factor asset classes by determining each financial product's effective asset mix with respect to the set of factor asset classes;
receiving an indication of a financial goal of a particular investor;
displaying a set of one or more input objects to receive input decisions relating to variables involved in pursuing the financial goal, the input decisions comprising an indication of a time horizon that is acceptable to the particular investor, an indication of a level of investment risk that is acceptable to the particular investor, and an indication of a level of savings that is acceptable to the particular investor;

Atty. Docket No.: 59036-249737

PATENT

determining expected returns and volatility of returns for each of a plurality of efficient portfolios based upon the relationship and the input decisions, each of the plurality of efficient portfolios including a combination of one or more of the financial products from the set of financial products;
identifying a recommended portfolio of the plurality of efficient portfolios by selecting an efficient portfolio of the plurality of efficient portfolios that maximizes an expected utility of wealth for the particular investor; and
causing to be displayed within a user interface screen displaying a representation of the recommended portfolio by graphically depicting relative allocations of wealth among those of the financial products of the set of financial products included in the recommended portfolio.

71. (Previously Presented) The method of claim 70, wherein said determining each financial product's effective asset mix with respect to the set of factor asset classes comprises performing returns-based style analysis.
72. (Previously Presented) The method of claim 70, wherein said determining each financial product's effective asset mix with respect to the set of factor asset classes comprises surveying the underlying assets held in the financial product.
73. (Previously Presented) The method of claim 70, wherein said determining each financial product's effective asset mix with respect to the set of factor asset classes comprises obtaining exposure information based on a target benchmark associated with the financial product.

Atty. Docket No.: 59036-249737

PATENT

74. (Previously Presented) The method of claim 70, further comprising:
forecasting returns associated with each core asset class of a set of core asset classes by
generating core asset class scenarios based upon future scenarios of one or more
economic factors with an equilibrium econometric model; and
forecasting returns associated with each factor asset class of the set of factor asset classes
by generating factor model asset scenarios based upon the core asset class
scenarios.
75. (Previously Presented) The method of claim 70, wherein the financial goal comprises a
retirement income goal.
76. (Previously Presented) The method of claim 75, wherein the indication of the time
horizon comprises an indication of a target retirement age for the particular investor.
77. (Previously Presented) The method of claim 76, wherein the set of financial products
that are available to the particular investor for investment comprise those that are
available to the particular investor through one or more defined contribution plans.
78. (Currently Amended) A method comprising:
a step for identifying a relationship between future returns of each financial
product of a set of financial products that are available to a particular investor for
investment and future returns of combinations of one or more factor asset classes of a set
of factor asset classes by determining each financial product's effective asset mix with
respect to the set of factor asset classes;
a step for receiving an indication of a financial goal of a particular investor;

Atty. Docket No.: 69036-249737

PATENT

a step for causing to be displayed within a user interface screen displaying a set of one or more input objects to receive input decisions relating to variables involved in pursuing the financial goal, the input decisions comprising an indication of a time horizon that is acceptable to the particular investor, an indication of a level of investment risk that is acceptable to the particular investor, and an indication of a level of savings that is acceptable to the particular investor;

a step for determining expected returns and volatility of returns for each of a plurality of efficient portfolios based upon the relationship and the input decisions, each of the plurality of efficient portfolios including a combination of one or more of the financial products from the set of financial products;

a step for identifying a recommended portfolio of the plurality of efficient portfolios by selecting an efficient portfolio of the plurality of efficient portfolios that maximizes an expected utility of wealth for the particular investor; and

a step for displaying a representation of the recommended portfolio by graphically depicting relative allocations of wealth among those of the financial products of the set of financial products included in the recommended portfolio.

79. (Previously Presented) A machine-readable medium having stored thereon data representing instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:
- receiving an indication of a retirement income goal for a particular investor;
- displaying a set of input objects within a user interface screen, the set of input objects to receive input decisions including at least:

Atty. Docket No.: 59036-249737

PATENT

an indication of a target retirement age for the particular investor, and
an indication of a target level of investment risk for the particular investor that is
constrained to be within a feasible set of risk that is attainable by the
particular investor via a set of financial products that are available to the
particular investor for investment;
identifying a relationship between future returns of each financial product of the set of
financial products and future returns of combinations of one or more factor asset
classes of a set of factor asset classes by determining each financial product's
effective asset mix with respect to the set of factor asset classes; and
displaying a set of output values within the user interface screen, the set of output values
including at least:
an indication of the probability of achieving the retirement income goal, and
an indication of the most likely retirement income in current dollars based upon
the retirement income goal, the input decisions, and a recommended
allocation of wealth among one or more financial products of the set of
financial products that are available to the particular investor for
investment.

80. (Previously Presented) A machine-readable medium having stored thereon data
representing instructions which, when executed by one or more processors, cause the one
or more processors to perform the steps of:
receiving an indication of a financial goal of a particular investor;
receiving input decisions that relate to tradeoffs in connection with pursuing the financial
goal, the input decisions comprising an indication of a time horizon that is
acceptable to the particular investor, an indication of a level of investment risk

Atty. Docket No.: 59036-249737

PATENT

that is acceptable to the particular investor and that is constrained to be within a feasible set of risk that is attainable by a particular investor via a set of financial products that are available to the particular investor for investment, and an indication of a level of savings that is acceptable to the particular investor;

identifying a relationship between future returns of each financial product of the set of financial products and future returns of combinations of one or more factor asset classes of a set of factor asset classes by determining each financial product's effective asset mix with respect to the set of factor asset classes;

determining a recommended portfolio of one or more financial products from the set of financial products that are available to the particular investor for investment based upon the input decisions;

determining the probability of the particular investor achieving the financial goal based upon a probability distribution representing a set of possible future portfolio values of the recommended portfolio upon expiration of the time horizon by evaluating the cumulative probability that meets or exceeds the financial goal; and

providing feedback regarding the likelihood of achieving the financial goal in view of the input decisions by displaying an indication of the probability of the particular investor achieving the financial goal in response to receipt of the input decisions.

81. (Previously Presented) A machine-readable medium having stored thereon data representing instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:
- receiving an indication of a financial goal of a particular investor;
- identifying a relationship between future returns of each financial product of a set of financial products that are available to the particular investor and future returns of

Atty. Docket No.: 59036-249737

PATENT

combinations of one or more factor asset classes of a set of factor asset classes by determining each financial product's effective asset mix with respect to the set of factor asset classes; and

allowing an end user to interactively explore tradeoffs among time, savings, and risk and their impact on a probability of the particular investor achieving the financial goal by

displaying one or more input objects in a first portion of a user interface screen, the one or more input objects being constrained to receive feasible input decisions relating to variables involved in pursuing the financial goal, the input decisions comprising an indication of a time horizon that is acceptable to the particular investor, an indication of a level of investment risk that is acceptable to the particular investor, and an indication of a level of savings that is acceptable to the particular investor;

determining a recommended portfolio of one or more financial products from the set of financial products based upon the input decisions; and

displaying a set of output values in a second portion of the user interface screen, the set of output values comprising an indication of the probability of the particular investor achieving the financial goal based upon the recommended portfolio, the relationship and the time horizon.

82. (Previously Presented) A machine-readable medium having stored thereon data representing instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:

Atty. Docket No.: 59036-249737

PATENT

determining a recommended allocation of wealth among a set of financial products that are available for investment by a particular investor, the set of financial products comprising one or more mutual funds;

identifying a relationship between future returns of each financial product of the set of financial products and future returns of combinations of one or more factor asset classes of a set of factor asset classes by determining each financial product's effective asset mix with respect to the set of factor asset classes;

said determining a recommended allocation of wealth being based upon (a) a financial goal identified by the particular investor, and (b) input decisions relating to variables involved in pursuing the financial goal, the input decisions comprising an indication of a time horizon that is acceptable to the particular investor, an indication of a level of investment risk that is acceptable to the particular investor, and an indication of a level of savings that is acceptable to the particular investor; and

graphically depicting the recommended allocation of wealth among the one or more financial products of the set of available financial products.

83. (Previously Presented) A machine-readable medium having stored thereon data representing instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:

identifying a relationship between future returns of each financial product of a set of financial products that are available to a particular investor for investment and future returns of combinations of one or more factor asset classes of a set of factor asset classes by determining each financial product's effective asset mix with respect to the set of factor asset classes;

Atty. Docket No.: 59036-249737

PATENT

receiving an indication of a financial goal of a particular investor;
displaying a set of one or more input objects to receive input decisions relating to
variables involved in pursuing the financial goal, the input decisions comprising
an indication of a time horizon that is acceptable to the particular investor, an
indication of a level of investment risk that is acceptable to the particular investor,
and an indication of a level of savings that is acceptable to the particular investor;
determining expected returns and volatility of returns for each of a plurality of efficient
portfolios based upon the relationship and the input decisions, each of the
plurality of efficient portfolios including a combination of one or more of the
financial products from the set of financial products;
identifying a recommended portfolio of the plurality of efficient portfolios by selecting an
efficient portfolio of the plurality of efficient portfolios that maximizes an
expected utility of wealth for the particular investor; and
displaying a representation of the recommended portfolio by graphically depicting
relative allocations of wealth among those of the financial products of the set of
financial products included in the recommended portfolio.